

METHOD AND APPARATUS FOR INBAND TESTING OF AN ECHO CANCELLER

ABSTRACT

Provided is a method and apparatus for inband testing of an echo canceller. The apparatus includes a signal generator for generating an excitation signal including a preamble portion and a test portion. The echo canceller receives the excitation signal at a decoder. The decoder differentiates the preamble from the test portion and obtains control information by decoding the preamble portion. A controller configures the echo canceller during testing according to the control information obtained from the preamble portion. A strength of the present invention is that the preamble portion allows precise control of the echo canceller during testing by synchronizing the test control to the location of the preamble. This allows exacting control of the echo canceller during testing to within a single sample time of the excitation signal, e.g., 125 microseconds. The control information includes any of the following: instructions related to the management of the H-register, instructions related to the management of the non-linear processor, instructions related to an adaptation function in the echo canceller, and timing information related to any of the aforementioned instructions. The preamble further identifies the test to be performed on the echo canceller and the type of test portion.